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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Steven Phillip Corcoran

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EXAMINER

MCPARTLIN, SARAH BURNHAM

ART UNIT

PAPER NUMBER

3636

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/568,599	Applicant(s) CORCORAN, STEVEN PHILLIP	
	Examiner Sarah B. McPartlin	Art Unit 3636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/3/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgement is made of applicant's claim for foreign priority based on application numbers 0319533.6, 0319526.0, 0319538.5 filed in the United Kingdom on August 18, 2003.

Information Disclosure Statement

2. The information referred to in the information disclosure statements filed on January 3, 2007 has been considered as to the merits.

Claim Objections

3. Claim 45 is objected to because of the following informalities: The following words/phrases lack sufficient antecedent basis:

- the thread section (claim 45, line 2)

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 28, 30, 41, 44-45, 54-55 and 59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 28 states that the movement “provides different lift patterns.” What is meant by the phrase “provides different lift patterns”? Did Applicant intend to state that the movement creates both vertical and horizontal displacement? Clarification is required.

Claim 30 states that the seat is securely retained to the cam to “allow temporary breaks or permanent connection of the cam profile.” What is meant by temporary breaks? Is Applicant stating that the seat can be either fixed permanently with respect to the cam or removable with respect to the cam? Clarification is required.

Claim 41 states that the brake system prevents rotation of the wheels. Wheels, however, have not necessarily been positively claimed. Claim 40 recites “wheels or sliders.” For clarity, it appears that applicant to first positively state that the seat frame is mounted on wheels and then explain the relationship of the wheels and the brake system.

Claim 44 recites a “coaxial gear” in line 2. What is the gear coaxial with? Is it coaxial with the rack? The motor? The cam? Clarification is required.

Claim 45 states that “the thread section” is made from a different material. A different material from what? From the flexible material applied to the thread section? Clarification is required.

Claim 54 states that the cam is connected to the seat “in way which does not significantly alter the load on the movement mechanism”. It is not clear how the load is altered or not altered based on connection to the seat. It is also not clear how the fixed

connecting member can be distributed at any point across the cam? Clarification is required.

Claim 55 states that the connecting member can vary in length, dynamically or set at certain distances away from the cam to suit interaction with open or closed channels. How does the connecting member vary in length? What are the open or closed channels? Clarification is required.

Claim 59 recites "a rigid flexible cam" in line 2. How can the cam be rigid and flexible?

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 27-35, 37-39, 43-45, 50, 52-55, 57, 59, 60 and 62 are rejected as best understood with the above cited indefiniteness under 35 U.S.C. 102(e) as being anticipated by DeVoss et al. (6,488,337). With respect to claim 27, DeVoss discloses a raiser seat for assisting a person from a sitting to a standing position (Figure 1): a seat frame (28)(30); a seat (12) adapted for movement relative to the seat frame (28)(30)

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between a lowered position (see solid line depiction in Figure 1) and a raised position (see phantom line depiction in Figure 1); and a movement mechanism (22) comprises at least one cam (40) and wherein the seat (12) is supported by the at least one cam (40) such that rotation of the at least one cam (40) results in movement of the seat (12) relative to the frame (28)(30) (see Figure 6).

With respect to claim 28, movement of the seat (12) between the lowered (Figure 5) and raised (Figure 6) positions provides different lift patterns including combinations of lift and tilt simultaneously.

With respect to claim 29, the at least one cam has a profile (i.e. relatively triangular), and the profile of the at least one cam is configured to determine a movement profile of the seat (i.e. upwards and forwards) as it moves between the lowered and raised positions such that a combination of lift, tilt and cycle time (dependent upon the length of the cam (40) and speed at which link (44) pulls cam (40)) of the seat can be varied for a particular application.

With respect to claim 30, the at least one cam (40) has a profile and the seat (12) is securely retained to the at least one cam (40), via bracket (26) to allow permanent connection (via pivot (50)) of the cam profile.

With respect to claim 31, the seat (12) rests on the at least one cam (40) by way of support (26).

With respect to claim 32, the seat (12) is supported by the seat unit (20).

With respect to claim 33, the at least one cam (40) is retained within the seat unit (20).

With respect to claim 34, a motor (62) for rotating the at least one cam (40) is provided. The motor (62) driving the cam (40) indirectly.

With respect to claim 35, the movement mechanism (22) includes a pair of cams (40) which are coaxial via connecting rod (42).

With respect to claim 37, the movement mechanism (22) comprises at least one actuator (column 5, line 43) at a first end of the seat (12).

With respect to claim 38, the combination of the at least one cam (40) with the at least one actuator (un-illustrated) provides for part or the entire seat to translate substantially in a single direction (i.e. upward).

With respect to claim 39, a second end of the seat (i.e. a rear end) is fixed to the seat frame (28)(30) and is moveable relative to a first end in a generally vertical direction.

With respect to claim 43, the at least one cam (40) is pivotally mounted at one or more locations (i.e. pivot points (52) and (54)) in the seat unit (20) and that at least one cam (40) rotates around the place where it is pivotally mounted.

With respect to claim 44-45, the at least one cam (40) is attached or integrated to a coaxial gear (66), in meshed engagement with a rack (56) manufactured of flexible material such that translation of the rack (56) results in rotation of the at least one cam (40).

With respect to claim 50, each cam (40) has an individual motor for its power source such that each of the cams can be precisely controlled and the seat can be tilted and rotated side to side. Column 6, lines 46-54 disclose multiple drive mechanisms.

With respect to claim 52, a seat unit (20) is provided, the seat (12) being supported by the seat unit (20), wherein a second end (i.e. rear end) of the seat (12) is fixed to either the seat frame or the seat unit, the second end of the seat being moveable relative to the first end in a generally vertical direction.

With respect to claim 53, the seat unit comprises at least one reinforcing unit in the form of an upward extending portion which supports frame (28)(30).

With respect to claim 54, the at least one cam (40) is connected to the seat (12) in way that does not significantly alter the load on the movement mechanism by the use of a fixed connecting member (26) or protrusion extending from the at least one cam which can be distributed at any point across the cam.

With respect to claim 55, the connecting member (26) 'can' vary in length, dynamically or set at certain distances away from the cam (40) to suit interaction with open or closed channels.

With respect to claim 57, the at least one cam (40) has multiple rotation points.

With respect to claim 59, an end section of the cam (40) is used to mount further non-rotation cam sections (38) to form a two or multipart rigid flexible cam.

With respect to claim 60, the connecting member (26) is engageable to provide two extra axes of movement.

With respect to claim 62, the seat frame (28)(30) comprises handles (32) located at any point on the seat frame to allow interaction with operators and users for accurate controlled movement and location with other components and assemblies.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeVoss (6,488,337) in view of Fischer et al. (5,782,533). As disclosed above, DeVoss reveals all claimed elements with the exception of a guide track formed in the seat for interfacing with at least one connection member extending from the cam.

Fischer discloses a cam (52) for moving a seat (1). The cam includes a connection member (53) which interfaces with a track (510) formed in seat (1).

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to add a guide track, as taught by Fischer, on the seat support (26) at a point where cam (40) is connected to the seat support. Such a modification would allow for greater horizontal translation of the seat thereby increasing the range over which the seat can travel.

10. Claims 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeVoss (6,488,337) in view of Blosswick (5,513,867). As disclosed above, DeVoss reveals all claimed elements with the exception of a seat frame mounted on wheels and brake system, wherein the lift portion of the seat is inoperable unless the brake system for the wheels is activated.

Bloswick discloses a seat frame mounted on wheels (24). Pivoting links (92) and (94) which allow lift of the seat (102) are only operable when wheel brake mechanism (98) is engaged with the wheel.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to mount the seat frame disclosed by DeVoss on wheels as taught by Bloswick. Such a modification provides easy maneuverability of the seat. Furthermore, applying a brake mechanism to the system that is automatically engaged upon activation of the lift mechanism is an obvious safety enhancement decreasing the chance of accidental falls and slips from the seat.

11. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeVoss (6,488,337) in view of Kao et al. (7,021,713). As disclosed above, DeVoss reveals all claimed elements with the exception of a pneumatic cylinder for additional seat support.

Kao teaches the use of pneumatic cylinder (40) for additional support of a seat (22) which is lifted on cam/link elements (41)(34).

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to add the pneumatic cylinder as taught by Kao et al. to the seat disclosed by DeVoss. Such a modification would remove some pressure/force from the camming elements, thereby decreasing the chance of breakage or premature failure of the device.

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12. Claim 46-47 and 65 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeVoss (6,488,337) in view of Komura (6,783,179). As disclosed above, DeVoss reveals all claimed elements with the exception of a control box and circuitry to controlling the output of the motor.

Komura teaches the use of a control (not shown) for controlling movement of the wheeled lift chair.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to provide a controller as taught by Komura for the operator to use to control the movement of the motor (62). Such an inclusion is readily known in the art as a means to activate / use a motor operated seat.

13. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeVoss (6,488,337) in view of Koga et al. (6,347,778). As disclosed above, DeVoss reveals all claimed elements with the exception of a pivoting backrest.

Koga discloses a backrest (15) which pivots by way of pivotal arm (12) with respect to the seat (14).

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to pivot the backrest (14) disclosed by DeVoss with respect to the seat (12) as taught by Koga. Such a feature is conventional in the art for providing user adjustability for seating units.

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14. Claims 49, 51, 63, 64 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeVoss (6,488,337) in view of DeWeese (5,161,812). As disclosed above, DeVoss reveals all claimed elements with the exception a seat with an aperture functioning as a commode.

DeWeese discloses a rolling and lift seat with a commode (26) integrated there.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to form a commode interface as taught by DeWeese in the seat disclosed by DeVoss. Such a modification would improve the versatility of the seating device, improving convenience for those seat occupant confined to the chair.

15. Claims 56 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeVoss (6,488,337) in view of Stewart (6,113,188). As disclosed above, DeVoss reveals all claimed elements with the exception of a roller shaft facilitating roller between the cam and the seat.

Stewart teaches the use of a guide track on a seat through which rollers, mounted on the ends of camming elements, slide.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to provide and roller and track interface between the cam (40) and the seat (12). Such a modification would provide for a greater range of motion for the seat, thereby increasing the user the adjustability of the device.

16. Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeVoss (6,488,337) in view of Wullum (US 2005/0116519). As disclosed above, DeVoss reveals all claimed elements with the exception of a cam which is spring loaded.

Wullum discloses a spring loaded joint for a lift seat.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to spring load the cam (40) disclosed by DeVoss as taught by Wullum. Such a modification would ensure that the seat automatically assists in lifting a person to their feet once a threshold force is removed from the cam.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Kerr (1,187,745); Araki et al. (5,709,364); Bennett et al. (5,178,025); Tanaka (2,919,744); Delmas et al. (6,578,920); Minai et al. (7,066,540); and Becker (DE 4129497 A1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah B. McPartlin whose telephone number is 571-272-6854. The examiner can normally be reached on M-Th 7:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Dunn can be reached on 571-272-6670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sarah B. McPartlin/
Primary Examiner
Art Unit 3636

SBM
July 17, 2008